



THE SC

A

ED BEF  
AT THE ANNUAL S

BENJAMIN W. A

FELLOW

OF THE

JOHN CHU  
NEW

# THE SCIENCE OF CURE.

## AN ADDRESS

DELIVERED BEFORE THE ST. ANDREWS MEDICAL GRADUATES' ASSOCIATION  
AT THE ANNUAL SESSION HELD AT THE FREEMASONS' TAVERN  
ON DECEMBER 2, 1869,

BY

BENJAMIN W. RICHARDSON, M.A., M.D., F.R.S.,

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS,

PRESIDENT OF THE ASSOCIATION.

ASSESSOR OF THE GENERAL COUNCIL OF THE UNIVERSITY OF ST. ANDREWS.

LONDON:

JOHN CHURCHILL AND SONS,  
NEW BURLINGTON STREET.

—  
1869.

LONDON :  
ODELL & IVES, PRINTERS, PRINCES STREET,  
CAVENDISH SQUARE.

## ON THE SCIENCE OF CURE.

---

FELLOW GRADUATES AND GENTLEMEN,

Some friendly critic speaking of these addresses which I have had the honour for two years past to deliver before you, has complained that they are not addresses confined to the purpose ; that is to say, that they are not simply spoken to you as an Association, but are obviously intended for the medical world at large.

At once and willingly I admit the correctness of this writer's statement, though I am forced to disregard his criticism. It seems to me, it were a narrow view to descant in this place on subjects which concern ourselves only. A representative body in every sense of the word, presenting medical science in every one of its varied phases, we are bound to speak with a voice that shall be distinct to every member of the profession to which we belong, if he will hear ; to show an earnestness which knows no exclusion, and an aspiration which is limited by anything rather than selfish desire. These are the ideas respecting our common tasks which I entertain, and if I am not grossly mistaken in respect to the thoughts of those with whom it is my pleasure and pride to be in frequent contact, they are your ideas also. Members of an University which claims an antiquity third only in this United Kingdom, and second to none in the persistent and steady task of keeping alight the lamp of knowledge, we are not, by tradition, likely to be extravagant or rash in our ambition to be catholic and progressive. Members of an University which has produced the scholar, Crichton the admirable—to whom history gives the palm for universality of genius and learning—we are not, by tradition, likely either to exert our skill in limited, and, except to ourselves, frivolous dissertation. We shall rather be inclined, as men usually are, however imperceptible the process, to follow our traditions as we do our hereditary instincts ; and standing still on the past, that we may see which way we ought to

go on the new roads that lie open before us, shall proceed cautiously to explore, and as we explore, accurately to define. Interpreting the position which through your favour I again hold by the ideal of object thus set forth, I have chosen for discourse during the present short hour a subject of general interest to all classes of medical men: *The Science of Cure*.

One word, nevertheless, must pass my lips before I come to this general topic; a word relative to our position at this time as a political and learned organization. We are I think forced to feel, and the sensation is pleasurable, that in carrying on the work for which we were originally bound together we have experienced an unvarying, and, I had almost been tempted to say, brilliant success. We have obtained a voice in parliamentary representation; we have set foot as rulers in the walls of our own University; we have made ourselves felt as a power in discussions affecting what may be called medical social science; in this vast city as our centre, where learned societies everywhere abound, we have taken our place amongst the rest, quietly, unostentatiously, but so securely, and with such freedom from jealous opposition, that other and older societies have willingly joined with us in the carrying out of objects intended for the welfare and happiness of mankind. Further, we have endeavoured, and we are assured by those who are outside us that the endeavour here again has been rewarded with success, we have endeavoured to increase the usefulness of physic by studying it and cultivating it with a growing aversion to its dogmas and a growing appreciation of its connection with pure and simple natural science.

We recall these truths with a sense of satisfaction, for that our exertions, however laborious they may have been, have been throughout profitable to ourselves in a degree far more than is commensurate with our exertions. Moreover we blend with this feeling the knowledge that our efforts have been useful to many, who, though allied to us by the tie of common fellowship as Graduates of the same University, have not felt themselves bound to unite with us in the plans we have laid out and executed for the welfare of the Medical Graduates as a whole. We are proudly conversant of the fact that the slights to which the possession of the St. Andrews degree was subjected some few short years ago, are heard no more; that the whips and scorns of time are felt no longer; that, in short, the world, always generous when by truthful and honest argument it is made conscious of its error or prejudice or in-



justice, has in our case relented, and that it recognises us now, not as the betters, for that would be dishonest, but as the equals of those who by accident or other cause are the owners of what were once more favoured honours and credentials. We are proud, I repeat, in being conversant of this change of public opinion; and we are happy from the consciousness that those who have not sown, have reaped with us, and have become co-partners in the value of our harvest.

I would stop here to proceed to the text of my address, but I cannot let the opportunity slip of tendering a personal acknowledgment. It has pleased the Graduates, who now form the General Council of the University of St. Andrews, to assert their newly acquired right of sending a representative to the University Court, as Assessor. In this act they have shown only what was to be expected, their own independent will and power, together with their determination to evince that the University is not to them a forgotten existence, a fountain of honour which once tasted may be left to its own course, but a living reality in which they have a living interest. On whomsoever the task of representing the Graduates, after such evidence of vital action as was shown at the late election, had fallen, I should have felt profoundly gratified with the result. But that unsolicited the Graduates should, by a large majority, have elected me to be their representative, is a distinction as little expected as coveted, and for which I can offer in return no more than most inadequate thanks, and a promise that in all which concerns the prosperity of the University—not the University as it lies, so silent and so lonely on the margin of the Northern Sea, but the University as it exists the world over, in the scholars who compose it—I will to the end of my term of office, if I live to that, devote myself, according to my best judgment, with untiring fidelity.

### SCIENCE OF CURE.

I leave the personal with much relief to come to that topic which is of general meaning—the science of curing disease. I deal boldly at once with the word and the act, Cure. Ambrose Paré, touched with a scepticism which is thought to belong to modern times only, or modestly concealing his own art, or venturing on a conceit which seemed to proclaim modesty, was accustomed to say respecting his

patients, "I treat them, God cures them." The sentiment is specious, because of the many ways in which it may be interpreted; but for my part, after thinking over it for many years as a sentence supposed to embody the whole meaning or meaninglessness of physic, I am forced to throw it aside in all interpretations of it except one, in which it becomes a flat truth, viz., that we are all, as the procedures from a common divine power, the mere instruments of that power, so that the thing we effect is the real agency of the power itself by which we are and do. To be fully explicit, I throw the sentiment aside when it conveys that what we do in the treatment of the sick is not, in effect, action towards cure, action we veritably command, but is something done for the sake of doing, the issue of cure having no absolute relation to our skill as curers. I cast, I say, this view aside as contemptible, false, wicked. We exist as a numerous, energetic, and influential body amongst the sons of men. Do we exist for nothing but to look on the miseries of mankind, and interfere and not cure? Is it to be assumed as a fact that if we were all snuffed out to-day the mass of mortality, of pain, of sorrow, would be the same this day twelve months as it is to-day, and that the army of untrained, uneducated men and women who by mere instinct would rise to fill our places as attendants upon the sick, would in the long run as effectively as we have done, fill the places we have occupied? The idea is preposterous: if we cannot say boldly as truthfully that we live to cure, it were better for us not live at all under the pretence of being curers. For myself, I can as boldly as truthfully affirm that I live to heal; that there are now a few persons at least in the world who but for me, or a some such aid as would have been rendered by some other Æsculapian brother, would now have been amongst the dead; and I am bold also to say that there are many whom I have relieved from pain and disease, if not from death; and what I venture thus to state as to myself, I state broadly as relating to every educated practitioner of medicine.

Affirming so much, let me at once qualify the general statement by admitting that our power for effecting cure is as yet limited; and let me again qualify this assertion by another, that the limitation of our power is not due to impossibility of effecting more, but to defective skill in carrying out what might be done, and what ought to be done. If we can cure ague or secondary syphilis, and we can cure both, we ought to be able to cure typhus or cancer; and if we can suppress smallpox wholesale, and we can so suppress it,



we ought to be able to suppress scarlet fever. In short, success in one direction proclaims the possibility of equal success in other directions, and leaves us the conscious masters of all the unknown in our vocation.

The question then is, Why are we so long tarrying in our way to successful progress? It would be an easy answer to plead the difficulties in the way, but the answer would be unworthy: for perhaps in some measure we may be the authors of the very difficulties we assert, and if we be not, in a calling such as ours, where every triumph is so noble a triumph, difficulties are the last reasons for complaint. No! let us drop difficulties, and looking the way before us and around us without hesitation, let us try and see what obstacles, not difficulties, demand removal; what new methods of research demand and command attention.

In this study it seems to me there are certain internal reforms of thought, and certain advanced and new modes of thought, required before we can make headway; we have to cast off weights which now too easily beset us, and to take up instruments for progressive work, with which our hands must learn to be more familiar.

#### OBSTACLES TO ADVANCEMENT.

The first load we have to cast off is general dogma and the use of meaningless phrases and conceits which are allowed too readily to be confounded with principles of science. We have to escape from the fangs of the learned without wisdom, in this effort; for it has happened that individual men have laid chains on us for generations by mere dogmatic and senseless speculation. Allow me to illustrate this truth by an example. In the beginning of last century there flourished at Halle a learned medical scholar by the name of Michael Albertus. Michael taught the practice of medicine in the University of Halle, with *éclat* unbounded. An industrious man, he left no less than three hundred and eighty-five essays behind him, not one possibly with a single poor fact; yet all influencing his days, and the days that came, and even the days that are. Full of speculative fancy leading to nothing, and wanting utterly in experimental foundation, our learned Michael took it into his head to divide the process of curing into three great branches, and he was good enough to devote a special essay to the elucidation of each branch. His first essay he named, "*De curatione per contraria*;" his second, "*De*

curatione per similia ;” his third, “De curatione per expectationem.”

The dogma enunciated in the first of these essays, because it seems to cover the largest view of curative medicine, has been the most orthodox, and in distinction of it, the term Allopathy has been applied. The dogma enunciated in the second of these essays, “De curatione per similia,” seized upon by another wilder and more concentrate dogmatist than the master, I mean Hahnemann, has been converted into a pretended all-curative system under the name of Homœopathy. The third of these essays, “De curatione per expectationem,” seized on by other concentrate dogmatists, has also been converted into a pretended system under the name of the Expectant Treatment; and has been the delightful resort and resource of all the timid sceptics for many generations. In fine, these three divisions of so-called curative medicine remain as actual systems to the present hour : absolute systems for men to live and practise by ; yet all gross and imbecile assumptions, each a curse blighting science, and saying to medicine :—“ You may be a practice, a system, a school, but a true science you shall not be.” Now I think the time has come when we should manfully declare ourselves freed not from one, but from all these dogmas. If a patient come to me with a limb broken and bent, I straighten that limb and place it firmly in its natural, as distinguished from its unnatural, position ; but it were an insult to tell me that because this is my practice I am an allopathist. If a patient come to me and say, “ I have eaten something which makes me faint and inclined to vomit,” I will give that patient an emetic, and relieve him of his anxiety ; but it were an insult to tell me that because I do this I am an homœopathist. If a patient come to me and say, “ I have a sadness of spirit which I cannot overcome,” and I see that he has no physical evil, I may decline to prescribe any specific remedy, but may assure him of his safety, and tell him in other words, after Horace :—

“ What if thy heaven be overcast,  
 “ The dark appearance will not last,  
     “ Expect a brighter sky ;  
 “ The god that strings the silver bow,  
 “ Awakes sometimes the muses too,  
     “ And lays his arrows by.”

And if this man, waiting for the brighter sky, as I advise and assure him, does in time see it and recover, I have truly treated

him; but it were an insult to tell me that because this is my practice I am a follower of those who carry out the expectant method.

Michael Albertus, well-meaning and innocent scholar, is a good mark of scholars for us in these days to avoid. I set him up to knock him down as a public danger, and I would like to bury him and all like him, lest any should stumble over him and then when down. My object has been to point the moral which his innocent but mischievous diversion teaches. The time lost, the intellect lost, the money lost, and in and by all these losses, the lives lost by constructive opposition to true progress, are incalculable, and the moral to be learnt from the history is, that dogmas in medicine ought from henceforth to be allowed no moment of life; but that every step of advancement in curing disease must be a single step, proved by its own excellence, based on its own merit. It must be like a chemical experiment, the details of which are known and are susceptible of being tested and demonstrated by every competent practitioner.

*First obstacle to be removed:—Dogmatic generalization.*

Another obstacle in our way, as it seems to me, is reliance on what is commonly called individual experience as distinct from general experience. I have heard from my youth upwards about the experienced practitioner, but for the life of me I never could, in a scientific sense, discover him. I never met with any one physician or surgeon who by virtue of special or individual experience actually cured more sick people out of a gross number treated, than any other physician or surgeon, while I have persistently observed that there are certain diseases which we all cure, by common methods, with equal facility. This observation forces on me the conviction that whatever is not common experience is not experience at all in the proper sense of the word; that is to say, not experience which is of any value, but mere experience of unknown coincidence running by the side of supposed curative application. When two men meet, and one, on his individual experience, records the great success which has attended his administration of some particular remedy, and the other affirms from as large an experience that he has had no success, what is to be believed:—something, nothing? Yes, something; to wit that the observation of the action of the said remedy is uncertain, and that the probabilities are all on the negative side. No two men disagree on the *obvious* effects of remedies. Every man who has seen chloroform administered agrees with the rest of his brethren that the chloroform produces a general and decisive effect, and this rule holds

good in respect to all medicines which are reliably based on general experience. In general experience we have common truth, in individual experience which cannot be generalized, we have special and undisguisable error, superficial observation and that pride of self-sufficiency which my Lord of Verulam has justly stamped as the idol of the den; that is the idol which each individual conceals in his own den or cavern which intercepts or corrupts the light of nature. Straight across the path of unproven individual experience, that experience which is personal and will not mix with all experience as fast as it is turned out, let us dig a trench that it may bolt off sideways, and an embankment that it may not flow on us. The work ought to be carried out promptly, promptly. We go to our societies, and what do we hear, until we are nauseated with the sound? Contention, contradiction; words, words, words! From what source? Experience. "I am very glad, Mr. President," says one, "that the author of the paper we have just heard has given us the results of his long experience; it is, sir, experience that we want in these societies. But, sir, I could not allow a paper so important as this to pass, without saying that from a course of observation, perhaps as extensive as my friend's, my experience of his treatment is contrary, nay I should say diametrically opposed, to the views he has so ably put before us." And when this debater has finished, a weaker knee'd brother will rise and in complaisant humour will affirm "that he has learnt something from both sides and in future will try both methods, assured that two men of such profound experience must both, in some points, be right." I ask you, brethren, is it not time that this system of airing individual experiences should be reformed altogether. Is there a scintillation of light or truth or sense in it? Are we not making conspicuous fools of ourselves when in the face of other and more exact scholars we talk in this contradictory and feeble strain? Candidly I think so, and while I know it is asking much of human nature to beg it to give up private judgments and conceits, so that nothing may be forced that cannot be made sensible to all, and nothing maintained that cannot be so defined as to use, as to be in accord with general observation, the asking is but the foreshadowing of a change which must inevitably come, and which cannot for the safety of medicine come too soon. *Second obstacle to be removed:—Individual experience that cannot be made general experience patent to all who will learn it and convincing to all.*

A third obstacle to be removed is the fear of public disfavour. In the armour of medicine there is no point so vulnerable as this fear.



In our attitudes to please the ignorant we sink daily too deeply in our own estimation, and by consequence in the admiration and confidence of the ignorant. On this timidity of ours the charlatan feasts. A grand remedy which the common experience of the best of our brethren has for centuries held as grand—a real remedy, from the absence of use of which men die daily—comes into popular disfavour, and lo, the profession deserts it as if it were poison or murder. Some new remedy springs up; it catches, by stray or accidental means, the public favour, and the public demand for it is actually listened to as if the professedly unlearned could and ought to think for the professedly learned. The natural result of this timidity is not satisfaction to the ignorant, but doubt respecting us all, and the introduction into our own body of scepticism on everything, cynicism, disbelief. Shall it be possible much longer for an historian of the present hour, truthfully and without fear of doing wrong, to proclaim to the historian of the future the terrible fact, that in this day, owing to the prevailing uncertainty as to our art, it would be quite possible for a professed healer to advance by stroke of fortune to the first rank of notoriety as a physician—I do not say fame, but notoriety—the said so-called healer having no belief in any remedial measure, but looking serenely on the work of each day of his life as so much ceremony which has simply to be got through with so much grace and deportment. I trust it will not be possible for this to be said long truthfully as a part of history. Every hour it remains a fact it demoralizes that hour; but if it is to be removed, the element of fear must be excluded from our own ranks. We must know in what we do believe, and be consistently firm in enforcing our belief, letting no temporary advantage to ourselves pay us for unmeaning, and, in our case, faithless complaisance.

Never was there a period in the course of physic when firmness of purpose was so seriously required. In the old days the physician existed as a solemn mystery; by his excess of learning he stood a head above those amongst whom he moved; there was a wonder and a charm surrounding him. The names of his drugs were, to the illiterate masses, symbols; he was a power, and his word was law. Now the charm is melting away, the symbols are well nigh lost in the blaze of general enlightenment, and we, as a body remaining in doubtful hesitation, must be approached in knowledge by the whole reading and thinking world. Our duty then, not less than our interest, is to retain our power. Shall we retain it by doubting

our own capacity to retain? I submit we shall not, and that we can only hold our own by the introduction into our learning of such positive science as shall enable us to be firm in all our work; firm in foreseeing results; firm in prescribing remedial measures, and simple in all things we carry out, our simplicity resting on our sincerity, and our sincerity on the exactitude and fulness of our attainments. *Third obstacle to be removed:—Fear of popular criticism and popular demand; in other words,—Fear of fashion and its caprices.*

I have dealt with three of the most potent obstacles to our permanent success as a profession, and now I turn to the consideration of some of those means of progress which will tend most surely to affirm us before the world, and to consolidate us as a living and useful power.

#### METHODS OF ADVANCEMENT.

I notice first on this head the necessity that exists for condensation of truths which we already partly understand. We have floated into a sea of profuse knowledge, and have thought that man the most eminent who has been the most adventurous in setting sail to know more. It would be folly to find fault with the pursuit of new knowledge; but there are times when to know much and not to do much is dangerous speed. A time must always come in every mind and in every class of minds when knowledge should be brought into definite shape and form by reason. One of our poets puts what I mean on this point into perfect language when he says—

- “ Knowledge and wisdom far from being one
- “ Have oft times no connection: knowledge dwells
- “ In heads replete with thoughts of other men;
- “ Wisdom in hearts retentive of their own.
- “ Knowledge, a rude unprofitable mass,
- “ The mere material from which wisdom builds,
- “ Till planed, and squared, and fitted to its shape,
- “ Doth but enumber whom it seems t’ enrich.
- “ Knowledge is proud that she has learned so much,
- “ Wisdom is humble that she knows no more.”

Who does not feel individually the whole force of this argument, and who is the thinking and thoughtful man who does not recognise its special force in relation to the progress of medicine into science? I look round on the instruments of cure now at our command, and in not one direction do I see any approach to complete-



ness of design. Great things are begun, used for a while, are unseemingly paraded, unbecomingly, nay, feebly admired; then lost for a time, supplanted by some other new object; anon revived, and again east aside. Richard Lower gives us the practice of transfusion of blood; it is a very rage for a season; it truly opens up lines of treatment, the value of which, were they followed out, were incalculable in beneficent results; but the practice is anathematised, and down it drops, for a century or more. It partially revives, and once again promises results unexpectedly grand. Again it falls, and to this day remains in no better, if so good, a position, as that in which its master left it. Vesalius and Hoeke put us on the way to the use of artificial respiration; another wonder in its day, and for a time it too is forgotten. It comes up again in our time, is asserted as doing what it never can do, is thereupon distrusted, except in some particular cases of emergency, and remains, potent as it is, as imperfect as a practice as when it was an imperfection connected with a first step of knowledge. Priestly and Beddoes opened up to us the practice of administering factitious atmospheres. The first results obtained were undeniably great, and once more all was wonder at the achievement. Time passes, and the practice falling out of favour lapses into uncertainty, and remains as uncertain as ever; so uncertain that at this hour the simple question, the most primitive question we could be called on to answer, the question, I mean, whether the administration of oxygen in different proportion to that in which it exists in the atmospheric air is in any case really serviceable, has received no approach to a solution in which any number of physicians concur. Galvani and Volta and Aldini put into our hands galvanism as a remediable measure, and surely no remedy at any time received so much attention; it is marked as an event even in the general history of the world. A hundred years have well nigh fled away, and what are we decided upon in respect to the value of galvanism in disease? The physicists have learnt the galvanic phenomena with exactness, have applied their knowledgo with a precision which leaves no doubt on any mind, and have made themselves masters of a science with which no impostor dare intermeddle. Stand we in the same position? Alas not. We continue still to use galvanism as a mode of restoring the dead to life. The one act proves our weakness. Supposo we should see an uninstructed man trying to set in action a galvanic pile, in which no oxidation was going on, by galvanising it from another pile in which oxidation was going on. What should we

think of the man? But this is what we, uninstructed men, actually do, and negative as the result is and must be, we think it a fine procedure.

I could multiply these illustrations to any extent; but enough has been submitted to prove, I trust, the proposition from which I started, that we require an interval of rest from search for new knowledge to enable us to consolidate the knowledge we actually possess.

I notice secondly that in approaching towards science of cure it is an essential matter to know what are the natural boundaries of cure. When are we practically to say,—“Here and now our art, our skill, ends”? To this question, in my opinion, the answer is that our skill ends only when in the living organism the natural cycle of life is completed. To my mind, all diseases which occur between the first and the second childhood are simple accidents; accidents as simple and as pure as collision or other physical misadventure; accidents to be avoided or prevented to a major extent, or if incurred, to be cured, should the curer have sufficient time to exert his curative skill. In this boundary, though it may seem limited to minds enthusiastic beyond reason, the practitioner of medicine finds ample scope for the noblest development of his power. To some ultimate fact he must bend, as must every student of natural science. A Newton may march up to the law of gravitation, and show, on definite principles, that the earth does truly attract all things to itself; but at this point even a Newton must needs stop, feeling that with the discovery of the law the power of the mind given to man finds its natural termination, and that to ask to know more is to assume a desire to take the place of the Supreme will that designs the law. And so the healer, carrying up his research to the limit of the human intellect, may assert laws, but there must stop. Forcing his conclusions beyond this point, he is led into the impossible difficulty of inventing a new nature, of devising a scheme out of his range altogether, by which the evolution of life out of death shall be superseded by the introduction of perpetual life in the same form of living organism. Absurd problem! Within the natural boundary then, the healer is safe, and all the extension and grasp of his intellect is occupied with a series of questions, than which none can be nobler, none worthier, the highest intellectual capacity.

I might dwell at this stage on the question of the prevention of the physical accidents with which life is surrounded from its first

to its last and natural stage ; but I am dealing with cure, not with prevention, and I therefore have to consider the scope and dimensions of cure. In other words, when the physical accident of disease has presented itself to us in any form, how shall we, within the natural limits, endeavour to save from unnatural death ?

In studying the question thus proposed, the primary object is to ascertain how far any skill which we may possess is actually demanded as skill to be enforced, as rule of doctrine and of practice. The case is before us : is it a case where the sufferer will recover without any artificial aid ; or is it a case where certain well-known and proved artificial assistance will assist recovery ; or is it a case where there can be no recovery in the absence of artificial assistance ; or is it a case altogether incurable ? Unfortunately up to the present time the natural division of diseases into these groups has received no serious consideration, and so we are apt to mix up skill with no skill, the active with the inert. To those who merely pretend to cure, this unmeaning and confused admixture, in which all is maze and noise, is shelter and satisfaction. In the confusion who shall discover the pretender from the earnest labourer. In the maze the pretender can move from morning to eventide, from year to year, from age to age, and his experience shall be,—that of a certain number of sick treated, a certain number shall die, a certain number shall recover, a certain number shall doubt him, and a certain number shall lift him up as the greatest of curers, in whom they have what they call faith ; faith, that is, in the man, not in his knowledge as a something that should be known. In this mazy crowd, in sorry truth, every shade of pretence finds its Alsatia. The man who dispenses infinitesimals which his arithmetic is far too weak to encounter ; the man who disbelieves out and out, and bows and laughs inwardly, and looks on : all here are one.

But to earnest men this maze can be no shelter, no hiding place. And so I say to them, it is time they were out of it ; time they knew the boundaries, the limitations of cure. I will dwell on this topic a moment longer, in an endeavour to open the way to new thought. We shall then, I think, relieve ourselves of much embarrassment if we can at any time come to some common standard of thought on the question whether there be any such distinct process as may be fairly demonstrated natural cure of disease. The *vis medicatrix nature*, what is that ? Is it a word or a fact ? We dwell upon it as if it were a fact ; we dwell upon it as if it were a principle on which we can often rely altogether, and on

which we can always rely to some considerable extent. Is this correct belief?

In my way of thinking the belief has, in the abstract, no basis whatever: by which I mean that nature goes her own way without putting out any hand to us for our special and particular aid. If nature were a curer as is supposed, then all diseases were spontaneously curable, and all other curers than herself were impostors. But nature pursues her way with men as regardless of their infirmities as of their powers, her general course being towards some grand and unknown end in which the individual sinks into his true insignificance by the side of the vastness of her structure, work, design. The physical living being is born, and by the force of birth is launched into space; but from the moment it is on the earth it is under the physical influence of the earth. As when I take a stone and cast it into the air, it moves for a time against gravity, then finds a point in which there is almost balance between the initial velocity and the attraction, and anon begins in gentle curve to fall, until it has fallen and lies, *dead*; so man, passing through his curve, endowed with initial velocity or motion of life, is making really and always towards the earth. He is weak, the earth is dragging him; he is faint, the earth has drawn him nearer; he dies, the earth takes him to herself. I speak of course now only of the physical man.

So nature, projecting the man, leaves him to meet the inevitable attraction of the earth. She gives him initial velocity, she endows him with reason to avoid many dangers, and with this attribute of reason she clothes and protects him through himself. For her part she pursues her way; he may guard himself from her fury as best he can, enjoy the profusion and happiness she offers as best he may; but she must proceed to the service of the general good. The living man left thus to his course, but with reason to guide him, is neither protected from disease, nor cured of it when assailed by any special natural power or force. On the contrary, the measure of his resistance to the accidental risks to which he is exposed is so small that it may succumb at a moment; nay, when the accident is so slight that the immediate consequence is avoided, the chance of restoration from the shock is but naturally commensurate with the resistance which the body can offer to the accident; no new power is evoked, no new velocity is put forth; the most that is restored is equilibrium, or return to the condition which the organism maintained previous to the accident. The term *vis medicatrix naturæ* is,



in fine, an entire misnomer, except it be limited in application to the simple capacity possessed by the organism at given ages, or periods of life, to resist gravitation. I doubt not that much of the confusion of thought which has ever surrounded this theory of a force leading to natural cure, has sprung from the observation of the resistance of youth to shocks from which the advanced in life are unable to survive. It has long been recognized, for example, that the result of severe surgical operations rests so distinctly on age, that a given mortality from a particular operation, say lithotomy, may be predicated according to age, when a sufficient number of operations have been performed to afford the groundwork of a calculation. Thus from a general deduction the mind has been led to individual definitions, and what is only true in respect to the value of resistance to attraction at periods when resistance is most active, has been made to appear true in regard to detailed changes occurring from disease within the body; until at length the most fearful structural changes have been posted up as structural cures.

I remember, in illustration of this false method of reasoning, a lecture I once heard from one of the enthusiastic believers in the *vis medicatrix*. The professor was desirous to demonstrate to his class the curative effects of nature in the disease known as pericarditis. He commenced his learned proof of natural cure by taking the heart of the cured man out of a pickle jar, and by describing from the disorganized specimen how beautifully the heart, by exudation of lymph, had become everywhere adherent to the pericardial surface. By this adhesion it was argued the pericardium had been prevented from filling with water—a far-fetched hypothesis in itself by the way—and so life had been saved. At what cost life had been saved, at what cost of future suffering, with what certainty of early death from mechanical impediment of the circulation, no word was told. The impression intended to be left on the mind of the student was, that in the disease in question nature supersedes art to such perfection that she had better in all such cases be left alone. To me this hypothesis of natural cure is beyond estimation mischievous. If I were to bring the abraded surfaces of the chest and arm together after an injury, and the two surfaces were to become adherent, I should be guilty of malapraxis; and when nature binds two surfaces that should be moveable into one inflexible surface, or does other equal damage, though she may not be imputed guilty of malapraxis, since she is carrying out her own

determinate course, she is most certainly not effecting cure, nor silencing the art which should prevent such disaster, by any better attempt to supersede art.

To trust to what is called *nature*, to the omission or neglect of scientific methods for cure, is to forsake the path of duty and leave to chance that which strictly falls under the exercise of reason. The trust is fatalism in physic; fatalism extended beyond our own interests to the life interest of those who submit themselves to our care. Are there however not some maladies, which, left purely and simply to the natural resistance, may recover without the intervention of art? In a very few slight diseases, possibly. But when the practised eye looks over the lists of disease, and the mind disposes itself to calm reflection, the list becomes insignificantly small, and the fact proclaims itself that even in the narrow list itself art is useful to cure: while, turning from the narrow slip to the long catalogue of serious disease, natural cure is the last remedy discernible. What natural process of cure is to be seen, acting as a general principle to be expected or to be relied upon, in such maladies as tubercular phthisis, cancer, syphilitic ulceration, hydrocephalus, ague, tetanus, cholera, hydrophobia? Is that a cure which leaves the sufferer from acute rheumatism with a disabled heart, or the patient under scarlet fever with structural change of kidney? Does nature or art cure ovarian dropsy or cataract? To the issue straightway. What does nature cure? I for one confess not to know. I see the stone taking initial velocity from my hand, and, uninterrupted in its course, making its way in graceful bend complete: I see it rise quickly, reach its prime, fall, rest. I see it interfered with in its way, roughly, so that it shall fall in mid-course, or slightly, so that it shall vary in direction and fall short: but, once impeded, I see no natural agency tending to make it pursue its original natural direction, or giving to it new power to resist the attraction of the great magnet. This, moreover, is what I see in the course of the physical body during its transit from birth to death, and the inference I draw from the observation is, that in following out our business of treating disease we are bound to let no idle pleasantry entice us from the effort of bringing up reason to originate and support art for the cure of every malady; to let no shrinking from labour, or other cowardly device, win us from the conscientiousness that whenever we leave disease to what we glibly call nature for cure, we confess ourselves to be what we are, incapable men, invoking an incomprehensible and indefinite aid. The



physicians once submitted what, to them, was incurable scrofula, to the royal touch.

Our minds clear on the great point that we must of a verity rely on our industry for the cure of disease, we have to bring into more perfect order for work our knowledge of the body itself. A mistaken idea prevails, almost universally, to the effect that knowledge of natural function should be secondary to what is called knowledge of practice. The royal road to success in combating disease lies, it is surmised, in knowledge of symptoms and remedies, and use of instruments for cure. Perfect knowledge of function, it is assumed, is very good for the student to learn, necessary for the teacher to sustain, interesting for the busy practitioner to possess, but cumbersome and laborious, and of small service for him to retain. Oh ! sad delusion. As no study is more elevating and expanding than the study of the parts of the living organism and its functions, so to the obedient and yet free mind none is so easy ; none so easy because of this beauty of it, that what is learned as new serves only to fix more persistently on the memory what has already been learned ; none so easy because the simplicity of the study increases in proportion as the scope of it extends and the unities of action are discovered ; none so easy because a knowledge of the whole elucidates parts and reduces the complex, I mean the apparently complex, into simple harmonies.

But the easiness and beauty of the study are not my motives for enforcing its cultivation. I would enforce the study for its practical utility if it had no other value. To be able at one flash of memory to take in the whole organic mechanism as though it were laid open before the eye, even as the works of the watch are open to the watchmaker ; to see the central heart beating in the order of its work ; the lungs expanding ; the gases in the lungs diffusing, the blood oxidating ; to see the stomach dissolving the food, the fluid food coursing into the circulation ; to see the blood changing in its circuit, yielding up its colloids to the tissues and retaining its crystalloids ; to see the busy lymphatics draining off the superfluous plasma, and the glands separating and discharging their respective fluids ; to see the nervous screens of the senses picking up impressions and the brain receiving them ; to see from its centres the animal force distributing from point to point ; to see the sympathetic regulating function ; and lastly, with this one grand view of structures and functions clear before the sight, to be able to detect how far perversion, observable in one function or part, influences

other functions and parts, and excites those phenomena which constitute what are called the symptoms of disease;—to see these things is to be a physician indeed, such an one as every physician should be. I set up in this review no ideal to be clutched at, but a reality to be grasped and held; a reality which, fully possessed, implies and carries with it unity of thought, unity of action, progress steady as the course of the sun, equality of knowledge, science, prescience, power;—the first and all-requisite steps towards curing disease in part or in whole.

Together with this knowledge, comprehensive yet simple, of the organic life, we require in these days to apply ourselves more determinately to the study of the action of remedies. In this work we have now opened to us several new modes of research. The relation of the chemical constitution of remedies to their physiological action, is one of the new studies we are thus invited to master, an invite the more gratifying because the study to be followed, during the brief period in which attention has been drawn to it, has teemed with cheering and certain promises. We have learned thus far in relation to chemical constitution, that substitution of one element for another, in complex chemical organic substances, may be sufficient to change the whole physiological action of these substances. We have learned that the increase of atomic weight of chemical substances modifies action, so that two bodies of the same family group, bodies belonging to the family of the alcohols for example, will induce in living animals distinct sets of symptoms, each so characteristic as not to be mistaken. We have learned that certain substances, after they have entered the body, undergo chemical decompositions which can be accurately explained as results of chemical changes occurring within the living crucible; results as definite as if they were made to take place in a glass retort. What is more, from these preliminary enquiries we are beginning to see our way so clearly as to forecast results; to be competent to predict from the known composition and the known physical qualities of a chemical substance, what will be its action upon the living animal, after its administration. Once more, we are travelling towards light in our attempts to discover the special action of particular remedies upon particular parts of the organism. Of one known substance we can say, its primary action is on the cerebral lobes; of another, its primary action is on the sympathetic centres; of a third, its primary action is on the extremities of motor nerves.

In each of these steps there is progress, progress which must be sustained by the mass of the profession falling in with it, and marching with steady and musical foot wherever it shall safely lead; progress which will speedily necessitate a complete revision of the Codex and Pharmacopœia, so that books full hitherto of dry formulas, of mixtures and pills, and powders and lotions, and receipts sundry, shall become true books of science; progress, laborious, perchance, and for a time perplexing, but which will more than repay both for the revolution and the labour.

And yet another step has to be taken. If we be called upon to study the influence of chemical constitution on the physiological action of our remedies, we have also to study with equal care and industry the influence of physical constitution on chemical action. Take one fact in illustration of what is further required in this method of advancement. A dose of opium which would suffice to kill two or three adult men may be given at once to a pigeon, and will induce no symptom of injury; but a few drachms of many simple crystalloidal substances, which would have no injurious effect whatever on the man, will kill the bird. Here is the result of difference of organization. The bird can so dispose of the opium that the drug is harmless, the man cannot; the man by virtue of quick fluid secretion can dispose readily of the salines, the bird cannot. The illustrations, I grant you, are extreme, but they bear directly on physiological practice: bear as showing how in the same class of animal, how even in the same animal, in man, differences in activity of function, differences dependent on age of subject, or construction, or disease of organs, may modify the action and the service of medicinal remedies.

I have not ventured in this place to present to your notice *details* of progress in the science of cure; that is a labour of my life elsewhere. I have chosen rather to depict the great steps of progress. Neither have I ventured to predict too much in the way of results; results may remain for our children. The fact for to day and for ourselves is labour. Our followers may be able to say, as they view the sick man struggling with what is now fatal disease, "let us put the man in such conditions for continuance of life that now he shall not die:"—but we must be content to lead towards that triumphant skill.

The position of mediciners at this moment is of men ascending a mountain to behold a new world. From the old world the ascent

is steep, and on it the professing explorers are variously grouped. Highest of all, toiling away reckless of all danger, heedless of clamour, progressing a step to-day and dropping a step to-morrow, but never failing, and never withdrawing their eyes from the goal to be reached, is a number, small but healthy, of pioneers, the scientific men of physic, who look upon themselves as almost too far removed from the world to trade with it; who see between themselves and the world many unscrupulous opponents, and who can never leave their work, even to gain their livelihood, without regret. These pioneers, struggling one day to the summit of the mountain, will discover the truth in its fulness, will make one and all, pupil and sufferer, come to them for assistance, and, in deed as in word, will command the position they have striven for. Behind the pioneers, magnificent in collegiate banners, and proudest often in their fondest weaknesses, are the masses of "legitimate medicine." They follow the pioneers, but grumble at them as they follow; call out at each step that it is rough, or irregular, or steep, or shallow, or unsafe; but do nevertheless proceed, hindered by nothing so much as their own doubt in limb, and load of individual experience. Beneath them, mounting no new step at all, wishing, indeed, to make no advance, but jabbering some obscure dogma, or pointing with ridicule to the proceedings enacting above them, stand the schismatics of physic, in garbs as various as all the national costumes of the earth, and with tongues and customs as incongruous. Placed nearest of all to the world, the world hears more of these than of any others, for they will be heard. To them, nolens volens, the sick man shall listen; of them, if it be but to rid himself of their importunities, he shall buy. They have a rule for every accident, a remedy for every malady, a cant dogmatical answer for every question. They are a lawless mob, noisy, cowardly, who, when the pioneers shall descend from the mountain, their victory achieved, will fly into the world and be lost for ever. As it is, though they stand as troublesome tricksters between the world and the scientific workers, they impede not the work.

"I treat, God cures." Thus bold Ambrose Parè, who, said his enemies when he replaced the seething iron by the ligature, "put life upon a thread." 'Twere a sin even for our friends the pioneers to forget so grand an exclamation. I hope they will retain it in their hearts reverently. Not as the abject confession of their uselessness in this world, but as the inner consciousness that they are

the instruments of a Supreme Intelligence, which, drawing nearer and yet nearer to them as they grow—

“ Day by day familiar  
“ With his conceptions, act upon his plans,  
“ And form to his the relish of their souls,”—

will, in proportion as they are prepared to receive it, fill them for their work with that eternal and celestial light, by which, in the fulness of time, all truths of nature shall be revealed to the faithful children of nature.

---







